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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------|-------------|----------------------|---------------------|------------------|
| 10/814,287 | 04/01/2004 | Haruo Nakaji | 50212-588 | 6117 |
| 20277 | 7590 | 06/27/2006 | EXAMINER | |
| MCDERMOTT WILL & EMERY LLP | | | HELLNER, MARK | |
| 600 13TH STREET, N.W. | | | ART UNIT | |
| WASHINGTON, DC 20005-3096 | | | PAPER NUMBER | |
| | | | 3663 | |

DATE MAILED: 06/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/814,287 | Applicant(s) NAKAJI ET AL. | |
| | Examiner Mark Hellner | Art Unit 3663 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noda in view of Bennett et al.

Noda discloses an optical amplifier comprising: an amplification medium (22) having a light propagation region which is doped with a rare earth element (column 4, line 56) and in which light propagating therethrough is amplified by a supply of pumping light and an equalizer (10) for equalizing a gain spectrum of the amplification medium and for compensating for temperature dependence of the gain spectrum of the amplification medium.

The difference between claim 1 and Noda is the use of a pumping light supplier for supplying pumping light whose wavelength is set such that a gain variation spectrum of the amplifying medium depending on temperature becomes smooth.

Bennett et al is cited to show that it was known at the time of the present application to use wavelength tuning of pump sources to tailor the gain curve of an rare earth doped amplification medium.

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It would have been obvious to have applied the teaching of Bennett et al to the amplifier (22) of Noda when seeking to tune its gain profile to better work with the equalizer (10), thus producing claim 1.

Claims 2-4 are taught by figure 1A of Bennett et al.

Claim 17 is met by figure 15 of Bennett et al.

Claims 5-16 are met by the properties disclosed for the long period gratings of figures 9 and 10 of Noda.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tsuda et al disclose the use of long period gratings to compensate EDFAs.

Any inquiry concerning this communication should be directed to Mark Hellner at telephone number 571 272 6981.

Mark Hellner

Primary Examiner

AU 3663

A handwritten signature in black ink, appearing to read "Mark Hellner", is located at the bottom left of the page.